

REMARKS**Summary of the Office Action**

In the Office Action dated April 2, 2004, claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over allegedly Applicant admitted prior art (AAPA) in view of U.S. Patent No. 6,297,862 to Murade.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA and Murade as applied to claims 1-20 above, and further in view of US 6,266,117 to Yanagawa et al.

Summary of Applicants' response

Applicants respectfully traverse the 35 U.S.C. §103 rejections of claims 1-21 for the following reasons.

Claims 1-21 contain patentable subject matter

Applicants respectfully traverse the 35 U.S.C. § 103 rejections of claims 1-21 because no *prima facie* case of obviousness has been established. As instructed by MPEP §2143, “[t]o establish a *prima facie* case of obviousness, ..., there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” Applicants respectfully submit that there is no showing of proper motivation or suggestion to modify or combine cited reference teachings.

Independent claims 1, 9, 11, and 19 each recite, among other features, the features of “a light-shielding member overlapping the switching device and extending from an end at the pixel electrode side of a metal thin film provided within the switching device into the pixel area, the

light shielding member covering and extending past all sides of the metal thin film with a margin sufficient to block light incident on the metal thin film (Emphasis added),” or like features.

Further, independent claims 5, 9, 15, and 19 each recite, among other features, the features of “a light-shielding member overlapping the charging device and extending from an end at the pixel electrode side of the metal thin film into the pixel area with a margin sufficient to block light incident on the metal thin film (Emphasis added),” or like features.

Applicants respectfully submit that Murade fails to teach or suggest how the allegedly Applicant admitted prior art (AAPA) can be modified to extend the black matrix “past all sides of the metal thin film with a margin sufficient to block light incident on the metal thin film. As described in the instant application at paragraph [0031], for example, due to this feature, the present invention can prevent the reflection of light by the metal film, such as drain electrode, thereby further improving contrast. Applicants respectfully submit that the Examiner errs in asserting that Murade provides a proper motivation to combine Murade with the allegedly Applicant admitted prior art (AAPA). The Final Office Action states at page 7 that “Murade indicates (col. 16, line 43 – col. 17, line 53) that the capacitance line (16) must be shielded from light, . . . , and that is a motivation to combine.” As Applicants understand, the Examiner’s rationale is summarized as follows:

(1) Allegedly Applicants’ admitted prior art (AAPA) teaches metal thin film in either the thin film transistor or storage capacitor, or in both.

(2) Murade teaches that the storage capacitor and the thin film transistor should be shielded from light by a light shielding layer. Therefore, Murade provides a proper motivation to combine or modify the teachings of the AAPA to reach the claimed invention.

Applicants respectfully submit that the Examiner's reasoning is in error for the following reasons.

At the outset, it is important to recognize that as described at col. 4, lines 43-51 in Murade, a metal film is described as a light blocking layer

Charging device or storage capacitor

In order to provide a proper motivation to combine, Murade must teach why the light shielding member of the AAPA needs to be extended into the pixel area with a margin sufficient to block light incident on the metal thin film of the charging device or storage capacitor, as recited in independent claims 5, 9, 15, and 19. This Murade simply fails to do.

First, in embodiments 5 and 6 (col. 16, line 43-col. 17, line 53, as cited by the Examiner) of Murade, "the capacitance line 16 is made of a polysilicon film." Murade, col. 16, line 54 and col. 17 line 25. As a result, the storage capacitor is formed with the capacitance line and the extension 1F from the semiconductor layer 1 below the capacitance line. Thus, there is no metal film in the storage capacitor disclosed in Murade. Accordingly, Murade does not teach the extension of the light shielding member into the pixel area with a margin sufficient to block light incident on the metal thin film of the charging device or the storage capacitor. While Murade does teach that the capacitance line 16 (formed of a polysilicon film) must be shielded from light (col. 16, lines 65-66; col. 17, lines 31-31), thereby necessitating the black matrix of the opposite

substrate having a large area, this alone does not suggest application of that structure to the charging device or the storage capacitor having a metal film therein. Actually, Murade suggests that when such a metal film is present, there is no need to have a light shielding layer. For example, col. 4, lines 43-51 of Murade reads:

According to the substrate for the liquid crystal device, the scan line is made at least of a metal film or a metal alloy film which makes it possible for the scan line to also act as a light shielding film. Because through this arrangement it is possible for the scan line as well as the data line to act as a light shielding film, placement of a black matrix on the opposite substrate can be safely omitted, by forming all the sides surrounding the pixel electrode so as to overlap with the data lines and the scan lines.

Similar descriptions are also found at col. 2, lines 6-9; col. 14, line 63-col. 15, line 5; col. 16, lines 33-38. Therefore, Murade does not provide a proper motivation to modify the teaching of the AAPA with respect to the charging device (or storage capacitor) to extend the light shielding member into the pixel area with a margin sufficient to block light incident on the metal thin film of the charging device or the storage capacitor, as recited in claims 5, 9, 15, and 19.

Switching device and thin film transistor

Similarly, there is no proper motivation to combine in Murade with respect to the thin film transistor or switching device. Nothing in Murade suggests that the metal film of the switching device or the thin film transistor should be covered by the light shielding layer with a sufficient margin, as recited in independent claims 1, 9, 11, and 19. Murade uses the black matrix to prevent the light from being incident to the *channel region*. This is evident from the very portion the Examiner recites—col. 1, lines 30-41 of Murade. However, this is in no way equivalent to the above-mentioned requisite motivation.

Indeed, according to Murade's teaching (in particular, in light of the above-recited portion of Murade), if there is some additional metallic structure that covers the channel region, then, no additional shielding of light by the black matrix is needed. Thus, Murade does not teach or suggest extension of the light shielding member into the pixel area with a margin sufficient to block light incident on the metal thin film of the switching device or the thin film transistor, as recited in claims 1, 9, 11, and 19.

Accordingly, Applicants respectfully submit that Murade does not provide a proper motivation or suggestion to modify the alleged Applicant admitted prior art (AAPA).

In view of the foregoing, Applicants respectfully submit that independent claims 1, 5, 9, 11, 15, and 19 are allowable at least because there is no showing of a proper motivation or suggestion to modify or combine the cited reference teachings .

Dependent claims 2-4, 6-8, 10, 12-14, 16-18, and 20-21 are allowable at least because of their respective dependencies upon allowable claims 1, 5, 9, 11, 15, and 19 and for the additional features they recite. Accordingly, Applicants respectfully request that the rejections of the claims under 35 U.S.C. § 103 be withdrawn.

Conclusion

In view of the foregoing, Applicants respectfully request reconsideration of this application. Should the Examiner believe that anything further would be desirable to place this application into even better condition for allowance, the Examiner is invited to contact the Applicants' undersigned representative by telephone at (202) 739-5660.

EXCEPT for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. §1.136(a)(3).

Respectfully submitted

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